

The rejection of claims 1 and 24 directed to packing segments alleges that Hemsley discloses a segment having a groove with brush segments and acknowledges that it fails to disclose the body portion being provided with a bore for accepting a spring between adjacent segments. However, Hemsley also fails to disclose segments that are movable radially; Hemsley only discloses that the brush seal in the central groove floats. Thus, Hemsley describes a stationary segment with a movable brush.

Brandon is cited for disclosing bores in the ends of adjacent segments for accepting springs therebetween. The rejection then alleges it would have been obvious to put bores in the ends of the segments of Hemsley as Brandon teaches. This allegation is traversed.

The rejection presumes that the segments of Hemsley are movable radially when, based on the teachings of that reference, they are fixed; only the brush seal has some radial movement.

Moreover, if the Hemsley segments with their floating brush seals are changed into Brandon-like segments, there are a myriad of unappreciated problems that make such a combination of references unworkable for an arcuate plurality of segments. The purpose of the springs in the ends of the segments is to force adjacent segments apart (*i.e.*, radially outward and away from each other). One can imagine that as the main segments move radially, the brush seal would slide circumferentially, into the gap between adjacent segments, because there is nothing to keep the brush seal in a fixed location with relation to the segment. Accordingly, with the brush seal now floating in the gap, it would be easy to imagine that the seals would prevent the segments from opening and/or closing fully by causing a jam (interfering with each other and/or with the adjacent segment). Considering the use to which individual segments are put, the suggested combination is unworkable.

If Hemsley's segments were modified to be like Brandon's, where in the segment end would one place the hole for the spring? The logical place would be where the floating brush seal terminates, but that is not a fixed location (because the seal floats). One can imagine that springs disposed between bores in adjacent floating brush seals would create a rather unstable configuration that would be unlikely to work for its intended purpose. On the other hand, if the springs were disposed between bores in the main part of the segment, there is the problem of the floating brush seals likely causing jamming when the segments retract (open) or contract (close). The modification alleged in the rejection *cannot* result in the Hemsley brush seal *not* being able to float because such a combination or construction of the references would destroy the operability (indeed the invention) of one of the cited references. *Ex parte Donachie*, 71 U.S.P.Q. 318, 320 (B.P.A.I. 1946); *In re Rosen*, 213

U.S.P.Q. 347 (C.C.P.A. 1982). While claims 1 and 24 may recite only a single segment, the rejection must be of the invention as claimed, as a whole, and so the use of such segments cannot be ignored. Accordingly, it would not have been obvious to combine the Hemsley and Brandon disclosures.

The rejection of dependent claims 2-4 over the combination of Hemsley, Brandon, and Noone is further traversed. Noone, like Hemsley, discloses a brush seal that does not retract (it is provided or allowed no radial movement). It would not have been obvious to substitute the lugs of Hemsley for the plate of Noone because the lugs of Hemsley do nothing to retain the brush; *see* page 4 (third full paragraph) wherein the brush is held in the slot by "appropriate fastening means (not shown)".

Further, such a modification still does not overcome the aforementioned deficiencies of the combination of Hemsley and Brandon. Along this line, Noone specifically discloses that the sandwiched plates holding the brushes are welded together (along with bristles, etc.; *see* Summary at col. 2, ln. 4-17). If Noone were combined with Brandon, the brush seal would not be able to retract because it is welded into one piece, and thus the inventive aspects of Brandon would be destroyed. Note also that page 4 of Hemsley suggests that the brush is a completely welded structure (just like the disclosure by Noone) and thus again Hemsley cannot be properly combined with Brandon because retractability is destroyed.

The rejection of claims 5 and 15 over the combination of Hemsley and Dalton is likewise traversed. First, neither of these references teach or suggest retractable packing, and so the invention defined by these claims cannot have been obvious over their combination because both claim 5 and claim 15 require that the packing be retractable. Second, Dalton is directed to spillstrips (*e.g.*, 17A/10A and 17B/10B in Fig. 3 thereof) and not to packing (*e.g.*, 20A/22A in Fig. 3); spillstrips are not retractable. Accordingly, this combination does not render obvious retractable packing with a non-floating brush seal.

Claims 6-10 and 20-23 stand rejected over the combination of Hemsley and Dalton, just discussed, and further in view of Synfelt, which rejection is similarly traversed. Applicants would not traverse the suggestion to substitute a coil spring for a leaf spring in certain embodiments, but Synfelt only describes the use of a leaf spring in combination with a bore and pin (50/52) to provide means for changing the clearance of the labyrinth and does not describe or suggest a retractable packing.

Finally, dependent claims 11-14 and 25-28 stand rejected as obvious over a combination of Hemsley, Dalton, Synfelt, and Noone, regarding the construction of the brush seal. As noted above, Noone describes that the brush is welded together, making it

impossible for such a brush to be incorporated into segments that retract and contract. Further, none of these references describe retractable packing, and so even if the combination were proper in light of the various deficiencies noted above with various combinations of these references, the instant claims cannot have been obvious.

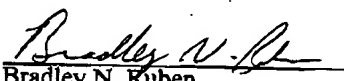
Obviousness-Type Double Patenting Rejection

This rejection, made over application 08/891,526, is believed to be moot in light of that application having been abandoned for failure to respond. While Applicants may later file a divisional, continuation, or CIP application, this rejection is now moot and should be withdrawn.

Conclusion

In view of the foregoing, withdrawal of all of the rejections, and further and favorable action, in the form of a Notice of Allowance, are believed to be next in order, and such actions are earnestly solicited.

Respectfully submitted,


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